Chapter 4. Preventive Measures

The objective of preventive measures is to protect new construction from hazards and see that future development does not increase potential losses. The building, zoning and planning, and/or code enforcement offices usually administer preventive measures. They include the following:

- Building Codes
- Standards for Manufactured Homes
- Planning and Zoning
- Subdivision Regulations
- Open Space Preservation
- Floodplain and Storm water Management

<table>
<thead>
<tr>
<th>Hazards Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Flood</td>
</tr>
<tr>
<td>➢ Tornado</td>
</tr>
<tr>
<td>➢ Winter Storms</td>
</tr>
<tr>
<td>➢ Thunderstorms</td>
</tr>
<tr>
<td>➢ Earthquake</td>
</tr>
<tr>
<td>➢ Drought</td>
</tr>
</tbody>
</table>

4.1. Building Codes

Building codes provide one of the best methods of addressing all the hazards in this plan. They are the prime measure to protect new property from damage by earthquakes, tornadoes, high winds, and snow storms. When properly designed and constructed according to code, the average building can withstand the impacts of most of these forces.

Hazard protection standards for all new and improved or repaired buildings can be incorporated into the local building code. Provisions that should be included are:

- Making sure roofing systems will handle high winds and expected snow loads, Providing special standards for tying the roof, walls and foundation together to resist the effects of wind (see illustration),
- Requiring new buildings to have tornado "safe rooms,"
- Including insulation standards that ensure protection from extreme heat and cold as well as energy efficiency,
- Regulating overhanging masonry elements that can fall during a quake,
- Ensuring that foundations are strong enough for earth movement and that all structural elements are properly connected to the foundation; and to prevent sewer backup in new basements.

Model Building Codes: Some communities in Illinois are working with various versions of the National Building Code of the Building Officials (BOCA). The predominate model of building being adopted by communities are the International Codes Series. All of the participating municipalities have adopted the International Code Series.

Both builders and inspectors need to know the details of proper anchoring to protect new buildings from high winds
**Tornado standards:** After a disaster, FEMA often sends a Building Performance Assistance Team to evaluate how well buildings built to code held up. A recent evaluation of wind and tornado damage concluded that the BOCA and CABO codes should be amended to incorporate wind load standards ASCE 7-95 and 7-98. The new I-codes have already incorporated these standards into their codes.

The Institute for Business and Home Safety (IBHS) has also reviewed the I-codes with respect to hazards such as hurricanes, floods, hail, and tornadoes. The IBHS recommends that the International Residential Code should be amended to increase design for wind loads to meet hurricane resistant standards.¹

**Fortified Homes:** IBHS has a set of recommendations to strengthen a building to better resist the impacts of natural hazards. The specific requirements for a "Fortified" home are available through the IBHS website at www.ibhs.com. A Fortified Tornado Windstorm Protection Checklist, provided on the website, defines nearly 20 standards, such as the size and depth of anchor bolts and materials of windows and skylights.

IBHS has researched the cost for implementing the Fortified program. The following table shows the increased cost of constructing a "Fortified" home. For less than 10% above the cost of the average home, a builder can incorporate all of the recommended criteria for a safer building.

<table>
<thead>
<tr>
<th>Standard Home</th>
<th>“Fortified Home”</th>
<th>Incremental Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact resistant windows &amp; doors</td>
<td>$5,450</td>
<td>$15,500</td>
</tr>
<tr>
<td>Garage doors</td>
<td>$650</td>
<td>$1,250</td>
</tr>
<tr>
<td>Roof decking</td>
<td>$650</td>
<td>$1,750</td>
</tr>
<tr>
<td>Sealing roof joints</td>
<td>$0</td>
<td>$650</td>
</tr>
<tr>
<td>Roof covering</td>
<td>$2,350</td>
<td>$3,350</td>
</tr>
<tr>
<td>Concrete/steel down pours</td>
<td>$0</td>
<td>$500</td>
</tr>
<tr>
<td>Fortified inspection costs</td>
<td>$0</td>
<td>$1,000</td>
</tr>
<tr>
<td>Total incremental cost</td>
<td></td>
<td>$14,900</td>
</tr>
<tr>
<td>Percentage of base cost</td>
<td></td>
<td>9.8%</td>
</tr>
</tbody>
</table>

**Flood standards:** The I-Codes have a section on flood protection that communities must adopt separately.

**Thunderstorm standards:** The IBHS also supports stronger codes for roofing standards so they can better resist damage from hail. It recommends that communities adopt the Underwriters Laboratory Standard 2218, to increase the impact resistance of roofing

¹ [https://disastersafety.org/fortified/](https://disastersafety.org/fortified/)
**Code Administration:** Just as important as the code standards is the enforcement of the code. There were many reports of buildings that lost their roofs during Hurricane Andrew because sloppy construction practices did not put enough nails in them. Adequate inspections are needed during the course of construction to ensure that the builder understands the requirements and is following them.

There is a national program that measures local building code natural hazard protection standards and code administration. The Building Code Effectiveness Grading Schedule (BCEGS) is used by the insurance industry to determine how well new construction is protected from wind, earthquake and other non-flood hazards. It is similar to the 10-year old Community Rating System and the century-old fire insurance rating scheme: building permit programs are reviewed and scored, a class 1 community is the best, and a class 10 community has little or no program.

**Local implementation:** Jersey County is at the present using the 2006 ICC codes along with the City of Jerseyville, Fieldon, Grafton, and Elsah. The office of the Jersey County Code Administrator, City of Jerseyville, Elsah and the City of Grafton conducts a 7-point inspection of all new construction projects to make sure that the codes are being adhered to. Fieldon is a very small village and funding is not available for an inspector. The county is a member of the CRS and currently has a rating of Class 5. Jersey County is also member of the BCEGS and has a Building Code Effectiveness Grading Classification of 4 for 1 and 2 family residential property and 4 for commercial and industrial property.

**CRS credit:** The Community Rating System provides flood insurance discounts to those communities that implement various floodplain management activities that meet certain criteria. Comparing local activities to those national criteria helps determine if local activities should be improved.

The Community Rating System encourages strong building codes. It provides credit in two ways: points are awarded based on the community's BCEGS classification and points are awarded for adopting the International Code series. Up to 120 points are possible.

The CRS also has a prerequisite for a community to attain a CRS Class 8 or better: the community must have a BCEGS class of 6 or better. To attain a CRS Class 4 or better, the community must have a BCEGS class of 5 or better. In other words, a strong building code program is a must to do well in the Community Rating System.

### 4.2. Manufactured Homes

Manufactured or "mobile" homes are usually not regulated by local building codes. They are built in a factory in another state and are shipped to a site. They do have to meet construction standards set by the US Department of Housing and Urban Development. All mobile type homes constructed after June 15, 1976 must comply with HUD's National Manufactured Home Construction and Safety Standards. These standards apply uniformly across the country and it is illegal for a local unit of government to require additional construction requirements. Local jurisdictions may regulate the location to these structures and their on-site installation.

As is well known, the greatest mitigation concern with manufactured housing is protection from damage by wind. The key to local mitigation of wind damage to mobile homes is their installation.
Following tornadoes in Oklahoma and Kansas, FEMA’s Building Performance Assistance Team found that newer manufactured housing that had been anchored to permanent foundations performed better. They also found that newer homes are designed to better transmit wind up-lift and overturning forces to the foundation. Unfortunately, they also found that building officials were often unaware of manufacturer’s installation guidelines with respect to permanent foundations.

**Local implementation:** The Illinois Mobile Home Act and Manufactured Home Tiedown Code are enforced by the Illinois Department of Public Health. The State code includes equipment and installation standards. Installation must be done in accordance with manufacturers’ specifications. There is a voluntary program for installers to be trained and certified. Following the installation of a manufactured home, installers must send the state a certification that they have complied with the State’s tie down code. Currently, Jersey County follows the Illinois Mobile Home Act and Manufactured Home Tiedown Code for installation requirements. Any mobile home located with the special hazard floodplain area is required to be elevated two feet above the base flood elevation. The County Code Administrator does inspections of the piers and foundations and a final inspection are performed for connections and proper tie downs. In addition to code standards to protect the mobile home from high winds is the need to protect the occupants. There is no state or federal requirements for shelters in mobile home parks. The City of Jerseyville and Elsah no longer allows mobile home installation.

**CRS credit:** Up to 50 points are provided for enforcing the floodplain management requirements in mobile home parks. Additional points are possible for other special regulations, such as prohibiting manufactured housing in the floodway. There are no CRS credits for manufactured housing standards for hazards other than flooding.

### 4.3. Subdivision Regulations

Subdivision regulations govern how land will be subdivided and sets construction standards. These standards generally address roads, sidewalks, utilities, storm sewers and drainage ways. They can include the following hazard protection standards:

- Requiring that the final plats show all hazardous areas.
- Road standards that allow passage of fire-fighting equipment and snow plows
- Requiring power or phone lines to be buried
- Minimum water pressures adequate for fire fighting
- Requiring that each lot be provided with a building site above the flood level
- Requiring that all roadways be no more than one foot below the flood elevation.

**Illinois Compiled State Statutes:** Chapter 55, Section 5/3-5029 requires that all subdivision plats must indicate whether any part of the subdivision is in a special flood hazard area.

**Local implementation:** Jersey County uses its Subdivision Ordinance for any new development outside the mile and one half of each municipality. The Jersey County Subdivision Ordinance
was last amended in 2007. The City of Jerseyville also uses its’ Subdivision Ordinance and Zoning Ordinance for any new development inside the city and it was last updated in 2012. Elsah and Fieldon are currently land locked for any construction of a subdivision and would need to consider annexing their city corporate limits. However, they have zoning in their communities. Jersey County and the City of Jerseyville also use the Soil and Water Conservation District office to do storm water run-off implementation for each subdivision. All of the aforementioned ordinances can be viewed on the municipalities’ web site.

**CRS credit:** Up to 25 points are provided for requiring that new streets in a floodplain be elevated to no more than one foot below the flood elevation. There are no CRS credits for requirements for hazards other than flooding.

### 4.4. Code Enforcement and Administration

The enforcement of a uniform construction standard promotes the building of safe and durable structures that are safeguarded from natural disasters such as earthquakes, tornadoes, high winds, and snow storms, as well as other disasters like fires and electrical malfunctions. Enforcement of building codes also plays a vital role in public safety and loss prevention. They contribute to the durability of buildings and help maintain quality of life and property values. In addition, building codes protect the substantial investment of home and business owners against poor workmanship and fraud. The uniformity of building codes allows building and materials manufacturers to operate on a larger scale, cutting costs and passing the savings on to consumers. Building codes are generally enforced at the local level through code administration.

A code administration program ensures compliance with proper design and construction practices by conducting inspections throughout the building process. It also provides peace of mind to the buyer who is relying on safe, sound construction. Code administration departments are usually funded by permit fees. The fees for building permits average less than one percent of the total construction costs. Properly trained plan reviewers and building inspectors are vital to the enforcement of a uniform code and the protection of consumers.

**Planning:** Building codes provide guidance on how to build in hazardous areas. Planning activities direct development away from these areas, especially floodplains and wetlands. They do this by designating land uses that are more compatible to the natural conditions of the land, such as open space or recreation. They can also benefit by simply allowing developers more flexibility arranging improvements on a parcel of land through the planned development approach.

**Comprehensive Plans:** The City of Jerseyville passed an Economic Development Plan adding two different Tiff Districts (Table 4.4.1 & 4.4.2). Grafton already has Tiff in place which expires in 2017 (Table 4.4.3 & 4.4.4). These plans are the primary tools used by communities to address future development. They can reduce future flood related damages by indicating open space or low density development within floodplains and other hazardous areas. Unfortunately, natural hazards are not always emphasized or considered in the specific land use recommendations.
Table 4.4.1 City of Jerseyville Tiff District 1

Source: Jersey County Supervisor of Assessments GIS
Table 4.4.2 City of Jerseyville Tiff District

Source: Jersey County Supervisor of Assessments GIS
Table 4.4.3 City of Grafton Tiff District

Source: Jersey County Supervisor of Assessments GIS
Table 4.4.4 State Highway 3 Annexed Grafton Tiff District

Source: Jersey County Supervisor of Assessments GIS

CRS credit: Up to 100 points are provided for regulations that encourage developers to preserve floodplains or other hazardous areas from development. There is no credit for a plan, only for the enforceable regulations that are adopted pursuant to a plan.

4.6. Retrofitting for Multiple Hazards

Retrofitting is a way of modifying an existing site or building to minimize or even prevent damage. There are a variety of techniques to do this. This section looks at the measures that can be implemented to protect existing buildings from damage by floods, sewer backup, earthquakes, tornadoes and high winds, and winter storms.

Flood retrofitting: Flood retrofitting measures include dry flood proofing where all areas below the flood protection level are made watertight. Walls are coated with waterproofing compounds or plastic sheeting. Openings (doors, windows, and vents) are closed, either permanently, with removable shields, or with sandbags.
Dry flood proofing of new and existing nonresidential buildings in the regulatory floodplain is permitted under State, FEMA and County regulations. Dry flood proofing of existing residential buildings in the floodplain is also permitted as long as the building is not substantially damaged or being substantially improved. Owners of buildings located outside the regulatory floodplain can always use dry flood proofing techniques. The alternative to dry flood proofing is **wet flood proofing**: water is let in and everything that could be damaged by a flood is removed or elevated above the flood level. Structural components below the flood level are replaced with materials that are not subject to water damage.

For example, concrete block walls are used instead of wooden studs and gypsum wallboard. The furnace, water heater, and laundry facilities are permanently relocated to a higher floor. Where the flooding is not deep, these appliances can be raised on blocks or platforms.

Wet flood proofing has one advantage over the other approaches: no matter how little is done, flood damage is reduced. Thousands of dollars in damage can be prevented by simply moving furniture and electrical appliances out of a basement.

A third flood protection modification addresses flooding caused by overloaded sanitary or combined sewers. Four approaches may be used to protect a structure against sewer backup: floor drain plugs, floor drain stand-pipes, overhead sewers, and backflow protection valves.

The first two devices keep water from flowing out of the lowest opening in the building, the floor drain. They cost less than $25. However, if water becomes deep enough in the sewer system, it can flow out of the next lowest opening, such as a toilet or tub, or it can overwhelm a drain plug by hydrostatic pressure and flow into the building through the floor drain. The other two measures, overhead sewers and backflow protection valves keep water in the sewer line during a backup. These are more secure, but more expensive ($3,000-$4,000).

**Earthquake retrofitting:** Earthquake retrofitting measures include removing masonry overhangs that will fall onto the street during shaking. Bracing the building provides structural stability, but can be very expensive.

Less expensive approaches may be more cost-effective for an area like Jersey County that faces a relatively low earthquake threat. These include tying down appliances, water heaters, bookcases and fragile furniture so they won’t fall over during a quake and installing flexible utility connections.

While these simple and inexpensive measures may be cost effective for a home or business, they may not be sufficient for protection of critical facilities. Fire stations need to be sure that they can open their doors and hospitals must be strong enough to continue operating during the shocks and aftershocks.

**Tornado and severe storm retrofitting:** Tornado retrofitting measures include constructing an underground shelter or “safe room” to protect the lives of the occupants. Their worth has been proven by recent tornadoes in Oklahoma, as shown in the photo to the right. They can be installed for approximately $3,000.
Another retrofitting approach for tornadoes and **high winds** is to secure the roof, walls and foundation with adequate fasteners or tie downs. These help hold the building together when the combination of high wind and pressure differences work to pull the building apart.

A third tornado and high wind protection modification is to strengthening garage doors, windows and other large openings. If winds break the building’s “envelope,” the pressures on the structure are greatly increased.

Retrofitting approaches to protect buildings from the effects of **thunderstorms** include storm shutters, lightning rods (illustrated to the right), and strengthening connections and tie-downs (similar to tornado retrofitting). Roofs could be replaced with materials less susceptible to damage by hail, such as modified asphalt or formed steel shingles.

**Winter storm retrofitting:** measures include improving insulation on older buildings and relocating water lines from outside walls to interior spaces. Windows can be sealed or covered with an extra layer of glass (storm windows) or plastic sheeting. Roofs can be retrofitted to shed heavy loads of snow and prevent ice dams that form when snow melts.

**Protecting Utilities:** burying utility lines is a retrofitting measure that addresses the winds from tornadoes and thunderstorms and the ice that accompanies winter storms. Installing or incorporating backup power supplies minimizes the effects of power losses caused by downed lines. “Retrofitting” the trees that hang over power lines is discussed in Section 6.13. Urban Forestry. Surge suppressors protect delicate appliances during thunderstorms.

**4.7 Insurance**

Technically speaking, insurance does not mitigate damage caused by a natural hazard. However, it does help the owner repair, rebuild and (hopefully) afford to incorporate some of the other mitigation measures in the process.

Insurance has the advantage that, as long as the policy is in force, the property is protected and no human intervention is needed for the measure to work. A standard **homeowner’s insurance**
policy will cover a property for the hazards of tornado, wind, hail, and winter storms. Separate endorsements are usually needed for earth movement (e.g., earthquake) coverage.

Although most homeowner’s insurance policies do not cover a property for flood damage, an owner can insure a building for damage by surface flooding through the National Flood Insurance Program. Flood insurance coverage is provided for buildings and their contents damaged by a “general condition of surface flooding” in the area.\(^2\)

Some people have purchased flood insurance because it was required by the bank when they got a mortgage or home improvement loan. Usually these policies just cover the building’s structure and not the contents. Renters can buy contents coverage, even if the owner does not buy structural coverage on the building. There is limited coverage for basements and the below grade floors of bi-level and tri-levels.

Several insurance companies have sump pump failure or sewer backup coverage that can be added to a homeowner’s insurance policy. Each company has different amounts of coverage, exclusions, deductibles, and arrangements. Most are riders that cost extra. Most exclude damage from surface flooding that would be covered by a National Flood Insurance policy.

Larger local governments can self-insure and absorb the cost of damage to one facility, but if many properties are exposed to damage, self-insurance can be a major drain on the treasury. Communities cannot expect Federal disaster assistance to make up the difference. Under Section 406(d) of the Stafford Act.

If an eligible insurable facility damaged by flooding is located in a [mapped floodplain] ... and the facility is not covered (or is underinsured) by flood insurance on the date of such flooding, FEMA is required to reduce Federal disaster assistance by the maximum amount of insurance proceeds that would have been received had the buildings and contents been fully covered under a National Flood Insurance Program (NFIP) standard flood insurance policy.

[Generally, the maximum amount of proceeds for a non-residential property is $500,000.]

[Communities] need to:

Identify all insurable facilities, and the type and amount of coverage (including deductibles and policy limits) for each. The anticipated insurance proceeds will be deducted from the total eligible damages to the facilities.

Identify all facilities that have previously received Federal disaster assistance for which insurance was required. Determine if insurance has been maintained. A failure to maintain the required insurance for the hazard that caused the disaster will render the facility ineligible for Public Assistance funding....

[Communities] must obtain and maintain insurance to cover [their] facility - buildings, equipment, contents, and vehicles - for the hazard that caused the damage in order to receive Public Assistance funding. Such coverage must, at a minimum, be in the amount of the eligible project costs. FEMA will not provide assistance for that facility in future disasters if the requirement to purchase insurance is not met. - FEMA Response and Recovery Directorate Policy No. 9580.3, August 23, 2000

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\(^2\) www.nfipservices.com
In other words, the law expects public agencies to be fully insured as a condition of receiving Federal disaster assistance.

**Local implementation:** Data on private insurance policies are not available. Flood insurance has been available in Jersey County, Grafton, Elsah and the City of Jerseyville since the 1974.

**CRS Credit:** There is no credit for purchasing flood or basement insurance, but the Community Rating System does provide credit for local public information programs that explain flood insurance to property owners. The CRS also reduces the premiums for those people who do buy NFIP coverage.

### 4.8 Open Space Preservation

Keeping the floodplain and other hazardous areas open and free from development is the best approach to preventing damage to new developments. Open space can be maintained in agricultural use or can serve as parks, greenway corridors and golf courses.

Capital improvement plans and comprehensive land use plans can identify areas to be preserved through any or all of the following means:

- Acquisition,
- Dedication by developers,
- Dedicating or purchasing an easement to keep the land open, and
- Specifying setbacks or buffer zones where development is not allowed.

**Local implementation:** Jersey County has over 234 buyout properties that are open space and deed restricted. These properties were purchased after the 1993 flood using state and federal money. The City of Jerseyville purchased land located in the floodplain and developed a lake for storm water retention and recreational use. Grafton uses open space property for a park or parking lots.

**CRS credit:** Preserving flood prone areas as open space is one of the highest priorities of the Community are one of the highest priorities of the Community Rating System. Up to 700 points can be given, based on how much of the floodplain is in parks, forest preserves, golf courses, undeveloped floodway or other uses that can be depended on to stay open. Additional credit is provided if there are deed restrictions on the parcels.
4.9 Floodplain and Storm Water Management

Development in floodplains is development in harm’s way. New construction in the floodplain increases the amount of development exposed to damage and can aggravate flooding on neighboring properties. Development outside a floodplain can also contribute to flooding problems. Stormwater runoff is increased when natural ground cover is replaced by urban development (see graphic). Development in the watershed that drains to a river or creek can aggravate downstream flooding, overload the community’s drainage system, cause erosion, and impair water quality.

Stormwater management encompasses two approaches to protecting new construction from damage by surface water.

- Regulating development in the floodplain to ensure that it will be protected from flooding and that it won’t divert floodwaters onto other properties; and
- Regulating all development to ensure that the post-development peak runoff will not be greater than under pre-development conditions.

Most communities participate in the National Flood Insurance Program (NFIP). The NFIP and the Illinois Department of Natural Resources set minimum requirements for regulating development in the floodplain. All new buildings must be protected from the base or 100-year flood and no development can cause an increase in flood heights or velocities.

Storm water runoff regulations require developers to build retention or detention basins to minimize the increases in the runoff rate caused by impervious surfaces and new drainage systems. Generally, each development must not let storm water leave at a rate higher than that under pre-development conditions.

Crisp credit: Preserving flood prone areas as open space is one of the highest priorities of the Community are one of the highest priorities of the Community Rating System. Up to 700 points can be given, based on how much of the floodplain is in parks, forest preserves, golf courses, undeveloped floodway or other uses that can be depended on to stay open. Additional credit provided if there are deed restrictions on the parcels.
4.9 The Government’s Role

Property protection measures are usually considered the responsibility of the property owner. However, local governments should be involved in all strategies that can reduce flood losses, especially acquisition and conversion of a site to public open space. There are various roles the County or a municipality can play in encouraging and supporting implementation of these measures.

**Government facilities:** One of the first duties of a local government is to protect its own facilities. Fire stations, water treatment plants and other critical facilities should be a high priority for retrofitting projects and insurance coverage. Often public agencies discover after the disaster that their “all-hazard” insurance policies do not cover the property for the type of damage incurred. Flood insurance is even more important as a mitigation measure because of the Stafford Act provisions discussed above.

**Public Information:** Providing basic information to property owners is the first step in supporting property protection measures. Owners need general information on what can be done. They need to see examples, preferably from nearby. Public information activities that can promote and support property protection are covered in Chapter 9.

**Financial Assistance:** Communities can help owners by helping to pay for a retrofitting project. Financial assistance can range from full funding of a project to helping residents find money from other programs. Some communities assume responsibility for sewer backups, street flooding, and other problems that arise from an inadequate public sewer or public drainage system. Less expensive community programs include low interest loans, forgivable low interest loans and rebates. A forgivable loan is one that does not need to be repaid if the owner does not sell the house for a specified period, such as five years. These approaches don’t fully fund the project but they cost the community treasury less and they increase the owner’s commitment to the flood protection project. Often, small amounts of money act as a catalyst to pique the owner’s interest to get a self-protection project moving. The more common outside funding sources are listed below. Unfortunately, the last three are only available after a disaster, not before, when damage could be prevented. Following past disaster declarations, FEMA, the Illinois Emergency Management Agency (IEMA) and the Illinois Department of Natural Resources have provided advice on how to qualify and apply for these funds.

**Pre-disaster funding sources**

- FEMA’s Pre-Disaster Mitigation (PDM) grants (administered by IEMA)
- FEMA’s Flood Mitigation Assistance (FMA) grants (administered by IEMA)
- Community Development Block Grant (administered by the Department of Commerce and Economic Opportunity
- Illinois Department of Natural Resources
- Conservation organizations, such as the Conservation Foundation and CorLands, although generally these organizations prefer to purchase vacant land in natural areas, not properties with buildings on them.
Post-disaster funding sources

- Insurance claims
- The National Flood Insurance Program’s Increased Cost of Compliance provision (which increases the claim payment to cover a flood protection project required by code as a condition to rebuild the flooded building)

Post-disaster funding sources, Federal disaster declaration needed

- FEMA’s disaster assistance (for public properties, however, after a flood, the amount of assistance will be reduced by the amount of flood insurance that the public agency should be carrying on the property) (administered by IEMA)
- Small Business Administration disaster loans (for non-governmental properties)
- FEMA’s Hazard Mitigation Grant Program (administered by IEMA)

Mandates: Mandates are considered a last resort if information and incentives aren’t enough to convince a property owner to take protective actions. An example of a retrofitting mandate is the requirement that many communities have that downspouts be disconnected from the sanitary sewer line.

There is a mandate for improvements or repairs made to a building in the mapped floodplain. If the project equals or exceeds 50% of the value of the original building it is considered a “substantial improvement.” The building must then be elevated or otherwise brought up to current flood protection codes.

In Unincorporated Jersey County SFHA it is a mandate that any new or replaced septic system must be a flood-proofed system. As Jersey County has an agreement with Elsah to issue permits, the same mandate would apply. Grafton has its own sewer plant.

Another possible mandate is to require less expensive hazard protection steps as a condition of a building permit. For example, many communities require upgraded electrical service as a condition of a home improvement project. If a person were to apply for a permit for electrical work, the community could require that the service box be moved above the base flood elevation or the installation of separate ground fault interrupter circuits in the basement.

Local implementation: Jersey County has used HMPG grants as well as DECA grants to buy out properties in the floodplain as well as the City of Grafton. Jersey County has also used PDM grants to locate 1138 structures in the floodplain and obtain the lowest floor elevation shots. Jersey County has also used the ICC claims process to elevate 3 residential structures throughout the Floodplain. After disasters Jersey County has used other government grants to clean out roadways and ditches to aid drainage and reduce ponding.
CRS credit: Except for public information programs, the Community Rating System does not provide credit for efforts to fund, provide incentives or mandate property protection measures. The CRS credits are provided for the actual projects, after they are completed (regardless of how they were funded or who instigated them). On the other hand, in order to participate in the CRS, a community must certify that it has adequate flood insurance on all properties that have been required to be insured. The minimum requirement is to insure those properties in the mapped floodplain that have received Federal aid, as specified by the Flood Disaster Protection Act of 1973.

4.10 Conclusions

Building Code Ordinances, floodplain ordinances, mobile or manufactured home ordinances as well as subdivision ordinances provide protection for future buildings and development within the County. Fieldon, Elsah and Jerseyville have zoning ordinances and Jerseyville also has an Economic Development Plan. Following the State Mobile and Manufactured Homes tie-down and protection from flooding regulations as well as the State’s adoption of the International Residential Code makes it easier for County’s to adopt their own codes. Although Jersey County does not have a zoning ordinance, it does have a Land Use and Subdivision Committee that regulates development and growth. The County has also adopted the 2006 ICC Codes and the 2012 IECC (Illinois Energy Conservation Code).

4.10.1 Recommendations:

1. Jersey County and local municipalities permitting officials need to be educated on current regulatory standards for installation of mobile homes, new state statutes, and new adopted ordinance.

2. Jersey County engages in comprehensive land use planning and appropriate regulations. Still moving forward. County is considering zoning regulations.

3. Jersey County joined the Community Rating System and within two years after joining the Insurance Services Offices they bettered their classification, from a class 8 to a class 5. Other municipalities should consider joining the CRS.

4. Jersey County and local municipalities should work together on code enforcement, building code language and sharing of GIS information. GIS information is shared with Grafton, Jerseyville, and Elsah and is also available on the county’s website.

5. Appropriate Jersey County and municipality officials and organizations engage in an aggressive public information and education program aimed at the retrofitting of residential and business structures.

6. The City of Grafton must continue to monitor new construction in the floodplain according to the guidelines set forth in the ordinances.
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